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ABSTRACT

Studies suggest that developmental students like peer tutoring, are more relaxed with peers, and feel that peer tutoring helps their grades. However, the small number of studies on college tutoring provides no consistent evidence that underprepared students who are tutored improve either their grades or grade point averages. The students who do earn higher grades after tutoring tend to be better prepared to begin with, have higher ability and/or more experience in college--there is no consistent evidence that tutoring helps the weakest students. Research does suggest, however, that underprepared students who were tutored remained in college longer than comparable students who were not tutored. Experts also agree about what constitutes a successful program; at a minimum, tutors are recommended by a faculty member, carefully screened, trained how to work with underprepared students before they start tutoring, and evaluated regularly by their coordinators, instructors, and their students. The dearth of research on tutoring may result from a lack of research skills among tutor coordinators; a lack of money, time and resources; the difficulty in comparing results from various kinds of tutoring; or other causes. However, as college tutoring programs adopt standards and better programs, researchers should examine the questions of whether, how, and to what extent tutoring can help underprepared students. A 39-item bibliography is included. (GFW)

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REVIEW OF

RESEARCH in Developmental Education

Gene Kerstiens, Editor

Published by Appalachian State University *Volume 7, Issue 4, 1990*

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Does Tutoring Help? A Look at the Literature

by Martha Maxwell

Although peer tutoring is a traditional method of helping students who are having academic difficulty and is extensively used in colleges today, it has attracted little attention from researchers. Most papers published about college tutoring are narratives—descriptions of programs, techniques for tutoring, methods for training tutors, and/or case studies. This paper reviews the research on tutoring and examines the problems of doing research in this area.

In American colleges, tutoring has endured ambiguous connotations. On the one hand, it is negative, associated with failing and needing a tutor. On the other hand, having one's own private tutor implies that one is wealthy and special. Although tutoring is a popular service on many college campuses, its stigma keeps some students who need help from using it.

Historically, tutoring has issued from and flourished in various academic arenas. Colleges have traditionally supported tutoring services for special groups like athletes and the deaf. (For a history of peer tutoring, see Stahl, Stahl, & Hank, 1986.) Student honor societies often provide free tutoring services, and those who need more, and can afford it, hire their own tutors. Programs for veterans who returned to college under the G.I. Bill included free tutoring services as have the federal and state funded programs for educationally and economically disadvantaged students since the 1960s. Today, almost all colleges in the United States offer individual content tutoring, and more than half offer group tutoring (Lisner, 1989). Many colleges provide tutoring to any student who needs it while others restrict free tutoring to students admitted under special programs and charge fees to others.

The literature on college tutoring suggests that programs are quite diverse. Tutoring programs vary in purpose and structure (Ahrendt, 1971; Brown, 1981; Bruffee, 1980), and tutor training programs are based on different philosophies. For example, some offer tutors assertiveness training (Hancock, 1989; Lange & Jakubowski, 1976) so that they may train their students to be assertive when necessary. Some programs stress collaborative learning (Bruffee, 1978), or reality counseling (Spann & Vandett, 1982), or learning theory and study skills (Schmelzer, Brozo, & Stahl, 1985), or probing skills (Brown, 1979), and at least one program uses peer tutors to help students overcome writing blocks (Wallace, 1987).

Tutor trainers use varied techniques. Some programs have developed videotaped training sessions (Dempsey, 1979); others use campus residence and campus resources in training (Shaw & Posey, 1987); or use evaluation as a developmental learning experience (Shaw, 1989); or use interaction place maps as training devices (Leary, 1987). However, these examples may represent atypical programs since many tutoring programs lack the funds to offer tutors more than a brief orientation program and a set of guidelines. Unfortunately few research articles on tutoring specify the amount of training or experience of the tutors studied.

Experts do agree about what constitutes a successful tutoring program. At a minimum, tutors are recommended by a faculty member, carefully screened and selected on the basis of performance criteria and knowledge of the subject, trained how to work with underprepared students before they start tutoring them, and evaluated regularly by their coordinators, instructors, and their students (Maxwell, 1979; Tripodi, 1987). In 1989, a NADE committee developed standards and guidelines for college tutoring programs along the lines of the CAS Standards for Learning Assistance Centers (Materniak & Williams, 1987). Also the College Reading and Learning Association (formerly WCRLA) has set standards for certifying college tutor training programs to enable them to award certificates to their tutors. (See *The Tutor Exchange*, a newsletter of the College Reading and Learning Association's Special Interest Group on Tutoring, for information on certification standards.) Undoubtedly, these efforts will eventually improve the quality of college tutoring.

The Unique Aspect of Peer Tutoring

Directors of developmental and learning assistance programs seem to agree that a well-trained tutor can serve a vital role in helping fellow students attain their academic goals. Beginning students, particularly those who are educationally and economically disadvantaged, feel more relaxed with peers and relate to them in a different way than they do with professional helpers (Grant & Hoeber, 1978).

Often programs encourage tutees to become tutors themselves in subsequent years and find them valuable assets.

Accordingly, Snow states, "The technique that the basic skills 'student turned tutor' used to master the material may represent a mode of learning unknown to the basic skills faculty member but extremely valuable to the basic skills student in need of tutoring" (Snow as quoted in Grant & Hoeber, 1978, p. 29).

Additional support for the use of college peer tutors over cross-class tutors comes from a study by W.C. Brown (1987), who found a significant relation between the degree of problem-solving tutees displayed in a college tutoring session and the college class standing of the tutors and tutees. The important variable was proximal class standing, not age. The closer the tutor and tutee were in college class, the more problem-solving the tutee engaged in during the tutoring session.

Furthermore, this study lends support to those who believe that tutor training is needed, for it found that tutors and tutees used different criteria to judge the success of a tutoring session. Tutors rated sessions that did *not* contain high problem-solving behavior as better, while tutees gave higher ratings to sessions *with* high problem-solving behavior.

Again, in high problem-solving sessions, tutees demonstrated and structured more while tutors demonstrated and lectured less. Tutors seemed to emulate the behavior of professors, expecting that lecturing was the appropriate way to tutor. Tutees disagreed.

Does Tutoring Improve Grades?

Investigators often report that tutoring is an essential ingredient of a successful developmental skills course (Wepner, 1987; Roueche, 1983; Adams, 1971). However, because tutoring is only one part of the services for underprepared students, and because it can take many forms—individual, group, drop-in, as an adjunct to programmed material, etc.—it is often impossible to show that individual tutoring, by itself, leads to higher grades for developmental students (Carman, 1975; Koehler, 1987; Vincent, 1983).

Some studies have found that students with relatively high ability or those with more experience in college profit most from tutoring. For example, Irwin (1980) studied 150 students who requested tutoring in statistics and divided them into three groups based on their academic records. One half of each group were randomly assigned to tutoring and the other half got no tutoring. Students at all levels of achievement who received tutoring earned significantly higher final grades in statistics than those receiving no tutoring. She replicated the study the following year and again found significant grade differences (Irwin, 1981).

It is difficult to prove that students who use the most tutoring earn higher grades because the weakest students usually need more intensive tutoring. But some research suggests that if underprepared students receive enough tutoring *regularly* and obtain tutoring early enough they will earn higher grades than students with equivalent ability who are not tutored. Watanabe and Maxwell, 1975 (as quoted in Maxwell, 1979, p. 99), found that educationally disadvantaged students who attended tutoring sessions *regularly*—at least once a week throughout the term—earned significantly higher grades in chemistry than those who received the same number of tutoring hours but whose attendance was irregular.

Another study showing that the amount of tutoring does not relate to grades was reported by Irwin (1981) in an experiment where students were randomly assigned to tutoring and nontutoring conditions. Irwin found no difference in achievement between tutored subjects who received different amounts of tutoring per week. In other words, those who had one to three tutoring sessions a week did as well as those who received four to six hours of tutoring per week.

Another type of program using peer leaders, Supplemental Instruction (SI), was designed to be an alternative for tutoring and has been found to help students improve their grades. In SI, a professional SI leader works with a course professor to identify the skills necessary to succeed in a course and trains student leaders to run SI sections where students develop new skills that they can directly apply to their course work. The SI model stresses voluntary attendance and the importance of choosing a high-risk course—one that many students make low grades in. Studies have shown that students who attend SI sessions experience achievement about a half-grade higher in the parent course than matched comparison groups who do not attend SI groups (Blanc, DeBuhr, & Martin, 1983; Dimon, 1988; Kenney, 1988; Martin, Blanc, & DeBuhr, 1982).

Tutoring and GPA Improvement

Tabulating changes in GPA before and after tutoring and checking on retention rates for students who are tutored vs. those who did not receive it are the most time-consuming, difficult, and expensive measures to collect. Further, these measures may not be valid if tutoring is given only to the weakest students. But because GPAs comprise hard data, "they provide more clout *for* the program if they are for it, but *against* it if they show no difference or are negative. Consequently, few tutorial programs use these measures and those that do usually base resultant decisions on an accumulation of data over an extended period of time" (Liberty, 1981, p. 71).

For this and other reasons, it is rare for studies to show that tutored students improve their GPAs. Noticeably, the findings on the matter—or issue—of GPA gain affected by tutoring are mixed. Hedges and Majer (1976) found that disadvantaged students who were tutored had significantly higher GPAs between their freshman and sophomore year than the group not receiving tutoring, but the difference did not continue during the sophomore year. McGinty (1989) reported that tutored students making marginal

scores on the SAT earned significantly higher GPAs than students not receiving tutoring. But for students with low SAT-Verbal scores, tutoring did not make a significant difference in the GPAs they earned. However, McGinty found small but significant gains in the GPAs of students at all levels of ability who attended Supplemental Instruction. This supports the findings of other studies of the effects of SI participation on students' GPAs (Blanc et al., 1983; Dimon, 1988; Martin et al., 1982). That studies on differences in GPAs between tutored and untutored groups often do not reach significance (Carman, 1975; Koehler, 1987; Vincent, 1983) suggests that what the student learns in the tutoring situation may not transfer to other courses while the skills learned in Supplemental Instruction may indeed transfer.

Tutoring and College Persistence

Research does suggest that students who were tutored remained in college longer than those who were not tutored (Carman, 1975; Hedges & Majer, 1976; Koehler, 1987; Vincent, 1983). Perhaps tutors encourage students to persist in their education. Or it may be that students who seek tutoring are more highly motivated to finish college than those who do not come in for tutoring.

Student Evaluations of Tutoring

Most programs administer questionnaires to tutees to evaluate the tutoring service. As mentioned above, researchers have difficulty demonstrating that tutoring improves grades, but when tutees are questioned, they often report that their course grade has improved. Woolley (1976) surveyed a random sample of students in California community colleges who had received more than 10 hours of tutoring assistance and found that 85% reported that their grades had improved. Also, 57% said they would have dropped the course if they had not been able to get tutoring.

How can one explain the discrepancy between the studies on the effects of tutoring on grades and the enthusiastic responses of grade improvement that students give on posttutoring questionnaires? Certainly students appreciate the help they get from tutors and frequently give them high ratings. Results like those reported by Shaw (1989), where students gave tutors an overall average rating of 4.7 out of 5, are not uncommon.

Perhaps the unidirectional-rating scales that are used promote the "halo effect" or perhaps students who remain long enough to fill out questionnaires about their tutors administered at the end of the semester are making more progress and are better satisfied than those who drop out of tutoring. Whatever the reason, tutees generally report they are satisfied with their tutors.

Recently I analyzed questionnaires from 20 college tutoring programs and found a wide range of questions (Maxwell, in press). Although the number of questions per questionnaire varied from 3 to 25, there were a total of 21 categories of questions. The spread must result from the differences between programs, although most of the items from most of the surveys concerned tutor characteristics (see Table 1). Three programs used only open-ended questions and one half asked no open-ended questions.

Table 1

Category	Percentage of Questionnaires Containing Items in this Category
Tutor characteristics:	
clarity of presentation	70
knowledge of subject	65
rapport with student (student's comfort level)	50
concern for student's learning	50
listening ability	50
tutor's interest/enthusiasm for subject	50
administrative concerns (e.g., punctuality)	50
ability to diagnose problem	25
Tutee changes:	
grade improvement	35
improvement in study skills, etc.	25
Overall:	
overall effectiveness	60
overall satisfaction	45

Some of the items asked about tutors were redundant—i.e., "My tutor was a good listener" and "My tutor gave me his undivided attention" would appear on the same instrument.

Surprisingly few programs asked questions about how the tutee had changed as a result of tutoring or how much effort the tutee put into the tutoring sessions. Only 10% of the colleges asked any questions about the tutoring program itself (location, scheduling, noise level, receptionist, etc.). So there is room for improvement in the design of the measures used to evaluate tutoring.

Why Is There So Little Research?

The dearth of research on college tutoring may result from the following constraints:

1. Tutor coordinators rarely have the research skills and almost never the incentive to undertake research projects with the exception of those individuals who are pursuing doctoral degrees.
2. Research and evaluation studies take money, time, and resources that are rarely available to the tuturing program.

3. Tutoring takes many forms—individual, group, etc.—and is offered for many types of courses. This makes it difficult to find significant differences and to generalize about results.
4. Tutoring represents just one part of programs designed to help under-achieving students who may be concurrently receiving other types of academic support.
5. Staff resistance to attempting to measure the effects of complex, interpersonal interactions often arises.

Perhaps this last factor explains why so many tutor directors are content to rest on their laurels when they get good student evaluations. Mike Rose's description of his dilemma as a tutor coordinator echoes the feelings of many others in the field:

> Things that seemed sensible, and, in other contexts would never be challenged, now become questions to be solved by quantitative evaluation. The tutorial center was asked to demonstrate, with numbers, that getting individual guidance with material you don't understand is helpful, that having a chance to talk about what you're learning is beneficial. The drive to quantify became very strong, a reality unto itself, and what you couldn't represent with a ratio or a chart—what was messy and social and complex—was simply harder to talk about and much harder to get acknowledged (Rose, 1989, p. 200).

Conclusion

Studies suggest that developmental students like peer tutoring and feel that it helps their grades. However, the small number of studies on college tutoring provide no consistent evidence that underprepared students who are tutored improve either their grades or their grade-point averages. The students who do earn higher grades after tutoring tend to be better prepared, have higher ability and/or more experience in college. In other words, there is no evidence that tutoring helps the weakest students.

Research does suggest, however, that underprepared students who were tutored remained in college longer than comparable students who were not tutored.

As college tutoring programs adopt standards and develop better tutor training programs, there should be greater opportunities for researchers to reexamine the basic questions of whether, and under what conditions, and to what extent, individual tutoring can help underprepared students. A related question is whether some other method of using peers in course-related services, such as Supplemental Instruction, is more effective than tutoring to improve the skills associated with achievement. Current research suggests that such other methods might be better.

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